

August 25, 2006

The Honorable Mark Sanford
Governor of South Carolina
Office of the Governor
P.O. Box 12267
Columbia, SC 29211

Dear Governor Sanford:

Clemson University Public Service Activities remains committed to enhancing the competitiveness of South Carolina's agribusiness cluster, the most critical component of the state's rural economy.

The support from the General Assembly in FY 2006-07 contributes directly to our ability to deliver the research, extension, and regulatory programs that are vital for the success of one of the state's leading industries. Our goal for this budget plan is to continue to build on our core mission of service to the agribusiness cluster and the citizens of South Carolina.

The FY 2007-2008 Budget Plans for Clemson Public Service Activities are summarized below. These priorities are part of a five-year plan to invest in public service programs that will directly impact economic development in South Carolina. We are hopeful the state can build on the modest increases that were recommended in FY 2006-07 and continue the support for Clemson Public Service Activities. Increased base funding to enhance the economic competitiveness of the state's agribusiness cluster remains our highest priority.

Budget Plan

Several critical programmatic needs are identified for which we seek specific base funding. These initiatives are:

- \$2.5 million for agribusiness cluster research, Extension and veterinary support,
- \$600,000 for the biotechnology research initiative,
- \$600,000 for genetics and human nutrition research.

These initiatives are focused on Clemson Public Service Activities' goal areas and are directly related to the state's efforts to build a knowledge-based economy.

Capital funding requests included in the budget plan are:

- \$16 million to construct a farm animal research center to replace 30-year-old facilities;
- \$32 million to construct a pilot-scale bioprocessing facility,
- \$5 million to construct a new turfgrass research and extension facility,
- \$5 million to construct a biosafety level III laboratory to enhance disease control measures, veterinary diagnostics and research at the Livestock-Poultry Health facility,
- \$1 million to complete infrastructure improvements to support agricultural crop and livestock research at the Edisto Research and Education Center.

The funding of these capital projects is a high priority and critical to our mission to enhance the agribusiness cluster in South Carolina.

Addendum

For FY 2006-07, the General Assembly worked to fund increases to Clemson Public Service Activities with an allocation of both recurring and non-recurring funds. However, even with these increases state allocations are 20% below the funding level as of June 30, 2001.

As a result of budget cuts since July 1, 2001, Clemson University Public Service Activities has dramatically reduced operating expenses and has lost 212 positions, leaving us seriously understaffed in some of our core agricultural areas. We also have begun efforts to make selected programs self-sustaining, using market-based pricing to remove these programs from state funding and allowing these funds to be reallocated to other internal priorities.

In the last two state budgets, Clemson University Public Service Activities was allocated additional funding specifically to rebuild expertise in strategic areas that are critical to the state's economic development, such as agriculture, biotechnology, forestry and natural resources. This is an excellent beginning, but there are still many unfilled positions that are vital to help the agribusiness cluster prepare for the future, attract new industries and new research partners, and build the knowledge-based economy in South Carolina.

If Clemson Public Service Activities is required to meet a "cost savings", or base reduction, of state appropriated funds in FY 2007-08, a plan would have to be implemented that would require further reductions and internal reallocations. These plans could ultimately result in a possible reduction in force, which would reverse the progress that has been made to rebuild critical expertise. The University's Board of Trustees may consider a number of alternatives if a "cost savings" is implemented. We believe that any further erosion of state support would hamper our ability to be competitive and affect our ability to provide vital support to the agribusiness cluster in South Carolina.

It is a difficult, if not impossible task to identify the lowest priority activities of Clemson University since each is important to meeting the needs of our agribusiness clients. The elimination of 10% of these activities would severely impact our ability to deliver on the services they need and expect. Each activity relates to an important component of our institution and critical to fulfilling the mission of Clemson Public Service Activities.

Provisos

Clemson University is not requesting changes to any provisos.

I realize you face difficult decisions to prioritize the budgetary needs of the State. I am hopeful that the value we provide to the agribusiness cluster of South Carolina will be seen as a high priority. We look forward to working with you and the legislature to build the state's knowledge-based economy and improve the quality of life for the citizens of South Carolina

Sincerely,

John W. Kelly
Vice President for Public Service and Agriculture

FISCAL YEAR 2007-08 BUDGET PLAN

I. EXECUTIVE SUMMARY

A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)

B. Statewide Mission: The Mission Statement of Clemson University Public Service Activities : To improve the quality of life for South Carolinians through research, education and quality assurance programs for food, fiber and natural resources.

C. Summary Description of Strategic or Long-Term Goals: The Public Service Activities at Clemson University focus resources toward five goal areas that are reflected in the university's ten year goals, in the Southern Association of Colleges and Schools (SACS) assessment procedures and in the five-year plan of work, which is negotiated with the U.S. Department of Agriculture. The PSA goals are to promote:

Goal 1: Agrisystems Productivity and Profitability

Goal 2: Economic and Community Development

Goal 3: Environmental Conservation

Goal 4: Food Safety and Nutrition

Goal 5: Youth Development

All of the units within PSA have aligned their programming, funding, evaluation and accountability functions around these five goal areas.

D.

Summary of Operating Budget Priorities for FY 2007-08:		FUNDING					FTEs			
		State Non-Recurring	State Recurring	Federal	Other	Total	State	Fed.	Other	Total
Priority No.:1	Title: Agricultural and Forestry Production: Enhancing the Agribusiness Cluster	0	2,500,000	0	0	\$ 2,500,000	16	0	0	16.0

Summary of Operating Budget Priorities for FY 2007-08:		FUNDING					FTEs			
		State Non-Recurring	State Recurring	Federal	Other	Total	State	Fed.	Other	Total
Priority No.:2	Title: Biotechnology Research Initiative	0	600,000	0	0	\$ 600,000	5	0	0	5.00
Strategic Goal No. Referenced in Item C Above (if applicable): Activity Number & Name: 1495 Agriculture Biotechnology										
Priority No.:3	Title :Genetics and Human Nutrition	0	600,000	0	0	\$ 600,000	3.4	0	0	3.40
Strategic Goal No. Referenced in Item C Above (if applicable): Activity Number & Name: 1495 Agriculture Biotechnology										
TOTAL OF ALL PRIORITIES		\$ 0	\$ 3,700,000	\$ 0	\$ 0	\$ 3,700,000	24.40	0.00	0.00	24.4

E. Agency Recurring Base Appropriation:

State \$ 43,533,084

Federal\$ 12,454,504

Other \$ 10,153,881

- F. Efficiency Measures: During the 2005-2006 Fiscal Year, the PSA Division at Clemson University aligned its Extension, research and regulatory activities into activity categories, which were derived from the five PSA goals. This made it possible to optimize existing resources to support distinct program activities and more clearly quantify projected impacts and outcomes. The 2005-2006 Accountability Report will reflect a strong emphasis on planning in these specific activities and the use of results from their evaluation in Section III, Category 2, Strategic Planning. The results of the Customer Focus emphasis described in Section III, Category 3, and the ongoing analysis of the Results presented in Section III, Category 7 and in Section I-2, Major Achievements from past years will assist in increasing research and delivery efficiency. Longitudinal comparisons of planned vs. actual performance across activities assist in identifying techniques to maximize resources in the activity areas.

G.

Summary of Capital Budget Priorities:			Additional State Funds	Previously Authorized State Funds	Total Other Fund Sources	Project Total
Priority No.: 1	<u>Project Name:</u> Farm Animal Research Center Activity Number & Name: 1510 Sustainable Agricultural Production Systems: Animal Production Systems 1495 Agriculture Biotechnology 1491 Reducing the Impact of Animal Agriculture on the Environment	Project No*:	16,000,000	0	0	\$16,000,000
Priority No.: 2	<u>Project Name:</u> Pilot Scale Bioprocessing Center Activity Number & Name: 1495 Agriculture Biotechnology	Project No*:	32,000,000	0	0	\$32,000,000
Priority No.: 3	<u>Project Name:</u> Turfgrass Research and Extension Center Activity Number & Name: 1482 Sustainable Agriculture Production Systems: Horticultural Crops 1487 Natural Resources and Environmental Research and Education: Water Quality and Quantity 1497 Integrated Pest Management (IPM) for	Project No*:	5,000,000	0	5,000,000	\$10,000,000

	Agriculture and Forestry 1505 Regulatory and Public Service Programs: Plant and Seed Certification 1507 Regulatory and Public Service Programs: Pesticide Regulation					
Priority No.: 4	<u>Project Name:</u> Edisto Research and Education Center Infrastructure Improvements 1489 Sustainable Agricultural Production Systems: Nutraceutical Crops 1495 Agricultural Biotechnology 1497 Integrated Pest Management (IPM) for Agriculture and Forestry 1510 Sustainable Agricultural Production Systems: Animal Production Systems 1514 Sustainable Agricultural Production Systems: Agronomic Crops	Project No*:	1,000,000			\$1,000,000
Priority No.: 5	<u>Project Name:</u> Expanded BioSafety Level (BSL) III Diagnostic and Research Capability: 1493 Agricultural Biosecurity 1504 Livestock Poultry Health Programs: Animal Health and Diagnostic Laboratory	Project No*:	5,000,000			\$5,000,000

Total of All Capital Budget Priorities:	\$ 59,000,000	\$ 0	\$ 5,000,000	\$64,000,000
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* If applicable

H. Number of Proviso Changes: 0

I. Signature/Agency Contacts/Telephone Numbers:

Agency Head Signature: _____
 John W. Kelly, Vice President, Public Service and Agriculture

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II. DETAILED JUSTIFICATION FOR FY 2007-08 OPERATING BUDGET PRIORITIES

A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)

B. Priority No. 1 of 3

C. (1) Title: Agricultural and Forestry Production: Enhancing the Agribusiness Cluster

(2) Summary Description: Agriculture and forestry represent the most critical component of the rural economy of South Carolina. The agribusiness sector creates more than 22% of all jobs, more than 17% of the income (\$15.1 billion), and more than 22% of gross sales (\$35 billion) in the state. If agribusiness is to sustain its economic value to South Carolina, it must be recognized as a vital industry cluster with emerging value-added opportunities.

(3) Strategic Goal/Action Plan (*if applicable*): Agrisystems Productivity and Profitability

D. Budget Program Number and Name: Livestock Poultry Health II A&B, Agricultural Research III, Cooperative Extension IV, Employee Benefits VIII

E. Agency Activity Number and Name:

1490 Sustainable Agricultural Production Systems: Organic Crops

1510 Sustainable Agricultural Production Systems: Animal Production Systems

1514 Sustainable Agricultural Production Systems: Agronomic Crops

1487 Natural Resources and Environmental Research and Education: Water Quality and Quantity

1488 Natural Resources and Environmental Research and Education

1498 Sustainable Forestry Management and Environmental Enhancement

1497 Integrated Pest Management (IPM) for Agriculture and Forestry

1495 Agricultural Biotechnology

1491 Reducing the Impact of Animal Agriculture on the Environment

1504 Livestock-Poultry Health Programs: Animal Health and Diagnostic Laboratory

F. Detailed Justification for Funding

(1) Justification for Funding Increase:

The requested positions will build an aggressive research and technology transfer system to enhance the state's agribusiness sector. This will strengthen the state's rural economy through improved agricultural production and profitability, enhance the agribusiness cluster by developing and applying new technologies in biomass conversion, and protect the quality of our water resources.

The following critical staff positions are needed to enhance the state's agribusiness cluster:

Agricultural Production

- **Nursery/landscape industry specialist** to support the state's fastest growing agricultural sector
- **Sustainable agriculture/niche market specialist** to enhance the organic produce industry
- **Extension transgenic crop weed scientist** at the Pee Dee Research and Education Center to enhance agricultural crop production
- **Veterinary toxicologist** to conduct applied research and provide accurate and timely laboratory diagnostic support for animal diseases
- **Field veterinarian** to support the dairy/cattle industry and to conduct disease outbreak investigations
- **Extension field veterinarian** to develop business continuity plans and animal response plans to protect the livestock industry from foreign animal diseases, such as Foot and Mouth Disease

Biomass Conversion

- **Bio-processing engineers** (3) to process agricultural and forestry biomass materials and develop commercial conversion methods
- **Advanced materials specialist** to develop value-added products from agricultural and forestry crops
- **Forestry/agricultural products specialist** to identify and enhance production of crops for biomass conversion
- **Waste management/green energy specialist** to convert biological waste products into commercially viable methane gas

Water Quality

- **Environmental toxicologists** (2) to identify pollutants in lakes, rivers and groundwater, and recommend remediation processes
- **Natural resource economist** to develop recommendations for economically sound policies and informed decision-making on environmental and natural resource issues
- **Watershed management specialist** to protect water quality and quantity in the Upstate

(2)

FY 2007-08 Cost Estimates:	State Non-Recurring Funds	State Recurring Funds	Federal	Other	Total
Personnel:					
(a) Number of FTEs*		16.0			16.0

(b) Personal Service		1,535,000			\$1,535,000
(c) Employer Contributions		448,220			\$448,220
Program/Case Services					\$ 0
Pass-Through Funds					\$ 0
Other Operating Expenses		516,780			\$516,780
Total	\$ 0	\$ 2,500,000	\$ 0	\$ 0	\$ 2,500,000
<i>* If new FTEs are needed, please complete Section G (Detailed Justification for FTEs) below.</i>					

(3) Base Appropriation:

State \$ 41,370,883
Federal \$ 12,478,549
Other \$ 7,685,159

(4) Is this priority associated with a Capital Budget Priority? No If yes, state Capital Budget Priority Number and Project Name: _____.

G. Detailed Justification for FTEs: In the past few years Clemson has been using existing vacant positions to fill positions associated with new appropriated General funds. New FTEs will be needed to be able to implement the requested initiative.

(1) Justification for NEW FTEs

(a) Justification:

(b) Future Impact on Operating Expenses or Facility Requirements:

(2) Position Details:

	State	Federal	Earmarked	Restricted	Total
Position Title: Faculty					
(a) Number of FTEs	16				16.0
(b) Personal Service	1,535,000				1,535,000
(c) Employer Contributions	448,220				448,220

	State	Federal	Earmarked	Restricted	Total
Position Title:					
(a) Number of FTEs					0.00
(b) Personal Service					\$ 0
(c) Employer Contributions					\$ 0

(3) FTEs in Program Area per FY 2006-07 Appropriation Act:

State 521.21
Federal 167.87
Other 65.35

Agency-wide Vacant FTEs as of July 31, 2006: 476.2

% Vacant 11.69% (All positions are included in H12 at State OHR)

H. Other Comments:

A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)

B. Priority No. 2 of 3

C. (1) Title: Biotechnology Research Initiative

(2) Summary Description:

Clemson is an active partner in the effort to build the infrastructure necessary to increase South Carolina's "knowledge-based" economy and to participate in growth of the life sciences industry. Biotechnology, one of the most research-intensive industries in the world, offers an unprecedented growth industry for the United States. It combines the life and agricultural sciences with engineering technology – two of Clemson University's strengths – and requires a well-educated, highly paid work force of research scientists, laboratory technicians and other skilled employees. To further build this knowledge-based economic sector in South Carolina, scientists in the following specialties are needed at Clemson:

- **Plant functional genomics** with expertise in plant molecular genetics and gene transformation to apply advanced genomic analysis technology to contemporary plant biology problems.
- **Industrial biotechnology** to identify and improve microbial strains that produce industrially significant products.
- **Forest genomics** to improve forest tree resistance to disease and insect pests
- **Transformational science** to commercialize transgenic plants

- **Pest functional genomics** to develop genetic resistance to insect and diseases

(3) Strategic Goal/Action Plan (*if applicable*): Agrisystems Productivity and Profitability

D. Budget Program Name and Number: Agricultural Research III, Employee Benefits VIII

E. Agency Activity: 1495 Agricultural Biotechnology

F. Detailed Justification for Funding

(1) Justification for Funding Increase:

The requested positions will attract industry funding and build South Carolina's economic base in the important life science and biotechnology industries, and will positively impact the state's food- and fiber-producing animals, plants and forests. An investment in Clemson's life science research and development expertise will:

- Increase the competitiveness of South Carolina's animal agriculture industry, which produced \$770 million in 2003
- Enhance South Carolina's reputation as a national leader in the nutraceutical industry, which nationally generates \$100 billion per year
- Improve the economic competitiveness of South Carolina's forest industry, the third largest industry in the state, worth \$15 billion in wood and non-wood products

(2)

FY 2006-07 Cost Estimates:	State Non-Recurring Funds	State Recurring Funds	Federal	Other	Total
Personnel:					
(a) Number of FTEs*		5.00			5.00
(b) Salary		340,000			\$ 340,000
(c) Fringe Benefits		97,500			\$ 97,500
Program/Case Services					\$ 0
Pass-Through Funds					\$ 0
Other Operating Expenses		162,500			162,500

Total	\$ 0	600,000	\$ 0	\$ 0	\$ 600,000
<i>* If new FTEs are needed, please complete Section F (Detailed Justification for FTEs) below.</i>					

(3) Base Appropriation:

State \$ 17,779,467
Federal \$ 3,780,522
Other \$ 1,479,763

(4) Is this priority associated with a Capital Budget Priority? No_____ If so, state Capital Budget Priority Number and Project Name: _____.

G. Detailed Justification for FTEs: In the past few years Clemson has been using existing vacant positions to fill positions associated with new appropriated General funds. New FTEs will be needed to be able to implement the requested initiative.

(2) Justification for New FTEs

(a) Justification:

(b) Future Impact on Operating Expenses or Facility Requirements:

(2) Position Details:

	State	Federal	Earmarked	Restricted	Total
Position Title: Faculty					
(a) Number of FTEs	5.00				5.00
(b) Salary	340,000				\$ 340,000
(c) Fringe Benefits	97,500				\$ 97,500

	State	Federal	Earmarked	Restricted	Total
Position Title:					
(a) Number of FTEs					0.00
(b) Salary					\$ 0
(c) Fringe Benefits					\$ 0

(3) FTEs in Program Area per FY 2006-07 Appropriation Act:

State	___216.41___
Federal	___38.53___
Other	___4.43___

Agency-wide Vacant FTEs as of July 31, 2006: 476.2

% Vacant 11.69% (All positions are included in H12 at State OHR)

H. Other Comments:

A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)

B. Priority No. 3 of 3

C.

(1) Title: Genetics and Human Nutrition Research

(2) Summary Description: Clemson University has expanded its research partnership with Greenwood Genetic Center, particularly in the areas of nutrition and disease prevention. This initiative will build on Clemson's expertise in plant and animal genetics and will expand the University's capabilities in nutrigenomics. As part of the collaborative, Clemson scientists will analyze the structure and function of genes that regulate the nutritional content in food.

They will study the genetic mechanisms through which specific food micronutrients influence human health and wellness. And they will seek ways to genetically manipulate plants to enhance their micronutrient content. This ground-breaking research will be affiliated with the Genomics Institute, the Institute for Nutraceutical Research and the Biosystems Research Complex at Clemson University. The genomics institute is internationally recognized for its collection of plant and animal genetic materials. The nutraceutical institute works closely with corporations interested in commercial development of this research and the biosystems research complex includes state-of-the art laboratory facilities.

(3) Strategic Goal/Action Plan (*if applicable*): Agrisystems Productivity and Profitability

D. Budget Program Name and Number: Agricultural Research III, Employee Benefits VIII

E. Agency Activity:
1495 Agricultural Biotechnology

F. Detailed Justification for Funding

To utilize these capabilities to improve the health of South Carolina citizens and to build the state's life sciences industries, scientists in the following specialties are needed at Clemson:

- **Nutrigenomics** to identify ways to control disease susceptibility genes in humans
- **Proteomics** to study the protein structure required for optimal utilization in genetic regulation
- **Systems biology** to identify the biochemical, cellular, molecular and genetic processes required for effective interaction
- **Protein biochemistry** to isolate and characterize the products of genes involved in nutrition

The requested positions will conduct research that will provide a foundation for better health for both the citizens and the economy in South Carolina. Discoveries from this research can improve the nutritional content of foods, improve the diet and health of citizens, and improve the state's ability to compete for new genetics and biotechnology industries needed to fuel job growth and per capita income. Nutrigenomics research will also attract nutrition-based companies to the state to manufacture "designer" foods or supplements that prevent disease and improve health. For example, phytochemicals in plants can enhance the function of human genes that protect against hypertension, heart disease, diabetes, obesity and cancer. These conditions affect South Carolina citizens at a disproportionately higher rate than other states, exacting a high toll on both the state's physical and economic wellbeing.

(2)

FY 2006-07 Cost Estimates:	State Non-Recurring Funds	State Recurring Funds	Federal	Other	Total
Personnel:					
(a) Number of FTEs*		3.40			3.40
(b) Salary		360,000			\$360,000
(c) Fringe Benefits		108,000			\$108,000
Program/Case Services					\$ 0
Pass-Through Funds					\$ 0
Other Operating Expenses		132,000			132,000
Total	\$ 0	\$600,000	\$ 0	\$ 0	\$600,000
<i>* If new FTEs are needed, please complete Section F (Detailed Justification for FTEs) below.</i>					

(3) Base Appropriation:

State	\$ 17,779,467
Federal	\$ 3,780,522
Other	\$ 1,479,763

(4) Is this priority associated with a Capital Budget Priority? No_____ If so, state Capital Budget Priority Number and Project Name: _____.

G. Detailed Justification for FTEs:

(1) Justification for New FTEs

(a)Justification: In the past few years Clemson has been using existing vacant positions to fill positions associated with new appropriated General funds. New FTEs will be needed to be able to implement the requested initiative.

(b)Future Impact on Operating Expenses or Facility Requirements: None

(2) Position Details:

	State	Federal	Earmarked	Restricted	Total
Position Title: Faculty					
(a) Number of FTEs	3.4				3.4
(b) Salary	360,000				\$ 360,000
(c) Fringe Benefits	108,000				\$108,000

	State	Federal	Earmarked	Restricted	Total
Position Title:					
(a) Number of FTEs					0.00
(b) Salary					\$ 0
(c) Fringe Benefits					\$ 0

(3) FTEs in Program Area per FY 2006-07 Appropriation Act:

State	___216.41___
Federal	___38.53___
Other	___4.43___

Agency-wide Vacant FTEs as of July 31, 2006: 476.2

% Vacant 11.69% (All PSA positions are included in Agency H12 at State OHR)

H. Other Comments:

III. DETAILED JUSTIFICATION FOR CAPITAL BUDGET PRIORITIES

- A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)
- B. Priority No. 1 of 5
- C. Strategic Goal/Action Plan (*if applicable*): Agrisystems Productivity and Profitability: Both agricultural producers and consumers in South Carolina are demanding sound scientific information on food safety, environmental quality, and animal welfare. These demands can only be met through sound research and education programs. Currently, the facilities to conduct these programs do not exist at Clemson University.
- D. Project Name and Number (*if applicable*): Farm Animal Research Center
- E. Agency Activity Number and Name:
1510 Sustainable Agricultural Production Systems: Animal Production Systems
1495 Agriculture Biotechnology
1491 Reducing the Impact of Animal Agriculture on the Environment
- F. Description of Priority: The University will construct new and renovate existing facilities to support the research and education programs in the animal sciences. These facilities will make it possible to conduct programs to address pressing issues facing both animal agriculture producers and consumers. Consumers of today are interested in low cost food products from a system that is free of pathogens, has minimal impact on the environment, and addresses the animal's welfare. Facilities do not currently exist to properly address mandates related to food safety, environmental quality, and animal welfare concerns.

G. Detailed Justification for Funding

(1) Justification for Funding Priority:

(a) Agricultural research is in the middle of a revolution that has significantly broadened the scope and impact of the results from animal research. It involves not only new and improved production methodologies that require modern facilities but also expands in new areas of science such as biomedicine, genetic mapping and the environment. Clemson must position itself on the cutting edge of science in order to ensure a strong and enduring future for the animal industries. In addition, today's animal facilities must be operated to assure quality care of the animals as well as present to the industry model systems of safety and biosecurity. Within the past ten years, the University of Georgia, Auburn, Virginia Tech, University of Kentucky, Mississippi State and North Carolina State have each invested between five and twenty-five million dollars in new or renovated livestock/poultry facilities.

(b) To address these issues Faculty committees, with input from many departments and animal industry representatives, have identified their future research, teaching and Extension farm needs in livestock and poultry. Execution of this Farm Center Plan will lead to:

- Recruitment and retention of outstanding faculty who expect modern research and education facilities
- Modern research, teaching and public service space for the 18 Clemson departments currently using animal farms
- A learning environment that places students in more realistic commercial livestock and poultry facilities
- Animal farms that are not only state-of-the-art but also in total compliance with state and federal regulations related to biosecurity
- Continued accreditation by the American Association of Laboratory Animal Care (AALAC)
- A work and study environment conducive to increased competitiveness for funding from federal, state and industry sources
- Enhanced gift and grant opportunities and stronger partnerships

(c) Both agricultural producers and consumers in South Carolina are demanding sound scientific information on food safety, environmental quality, and animal welfare. These demands can only be met through sound research and education programs. Currently, the facilities to conduct these programs do not exist at Clemson University.

(d) There are not other known sources of funding to construct these facilities. State, Federal, and private funds will be used to support the research and education programs in these facilities.

(e) PSA does not have excess operating funds to construct these facilities. Current funds are fully committed to on-going PSA programs.

This project was priority 1 on the PSA 2006 CPIP.

(2)

Total Project Cost Estimates:	Additional State Funds	Previously Authorized State Funds	Total Other Fund Sources	Project Total
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Total Project Cost*	16,000,000			\$16,000,000

* If additional annual operating costs from any source of funding are anticipated upon project completion please complete Sections H and I (Justification for Additional Future Annual Operating Costs) below.

H. Justification for First Year Additional Future Annual Operating Costs:

Will additional annual operating costs be absorbed into your existing budget? __Yes__

If not, will additional state funds be needed in the future? _____

If state funds will not be needed in the future, explain the source(s) that will be used. __ _____

First Fiscal Year Additional Annual Operating Costs Are Anticipated: _____ Will this fiscal year require a partial or full year's operating funds? _____ If a partial year's funds are required, what portion of the year does it cover? _____

(3)

Additional Annual Operating Cost Details:	State Non-Recurring	State Recurring	Federal	Other	Total
Total Costs:					
(a) Number of FTEs					0.00
(b) Total Personnel Costs					\$ 0
(c) Furniture/Equipment					\$ 0
(d) Other Operating Costs					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

I. Justification for First Full Year Additional Future Annual Operating Costs (If Section H above represents a full year's operating funds, do not complete this section.)

(1) Will additional annual operating costs be absorbed into your existing budget? _____
 If not, will additional state funds be needed in the future? _____
 If state funds will not be needed in the future, explain the source(s) that will be used. _____

(2) First Full Fiscal Year Additional Annual Operating Costs Are Anticipated: _____

(3)

Additional Annual Operating Cost Details:	State Non-Recurring	State Recurring	Federal	Other	Total
Total Costs:					
(a) Number of FTEs					0.00
(b) Total Personnel Costs					\$ 0
(c) Furniture/Equipment					\$ 0
(d) Other Operating Costs					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

J. Other Comments:

A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)

B. Priority No. 2 of 5

C. Strategic Goal/Action Plan (*if applicable*): Agrisystems Productivity and Profitability

D. Project Name and Number (*if applicable*): Pilot Scale Bioprocessing Center

E. Agency Activity Number and Name: 1495 Agriculture Biotechnology

F. Description of Priority:

Clemson University proposes to develop a pilot scale biotech manufacturing/bioprocessing facility to support process development, product development, and research for public institutions and private companies. The facility would provide opportunities for degrees and advanced educational opportunities in graduate and PhD programs in biochemistry and bioprocessing manufacturing management. Facilities to address these research and development opportunities do not exist in the State of South Carolina.

G. Detailed Justification for Funding

(1) Justification for Funding Priority:

(a) The biotechnology industry continues to expand, doubling revenues since 1996. Similar bioprocessing pilot facilities at the University of Maryland and the University of Colorado have been instrumental in advancing in-state research and promoting the creation of new life science companies. The proposed facility at Clemson University addresses the challenge of enhancing the return on research through creating a facility that promotes product development and commercialization, while supporting economic development objectives of new company formation.

(b) A pilot bioprocessing facility will bridge the gap in commercialization, linking bench-top research with a commercially viable development. The pilot scale bioprocessing facility will build on the unique biochemistry and engineering capabilities at Clemson University providing compounds for applied use in agriculture, chemicals, textiles, materials and pharmaceuticals. This program supports the recruitment of the biotechnology industry to South Carolina and the statewide initiative of the conversion to a knowledge or technology driven-economy.

(c) The proposed Clemson University facility provides an economic advantage for all state research institutions, supporting process development, product characterization, and commercialization of concepts from across South Carolina.

(d) The facility will serve as a strong recruiting tool to bring to the State the brightest scientist to work both the academia and developing biotechnology companies. It will also serve in recruiting Biotechnology companies to the area to utilize the facility and to partner with the University in commercializing developing new biotechnologies.

This project was priority 2 on the PSA 2006 CPIP.

(2)

Total Project Cost Estimates:	Additional State Funds	Previously Authorized State Funds	Total Other Fund Sources	Project Total
Total Project Cost*	32,000,000			32,000,000

** If additional annual operating costs from any source of funding are anticipated upon project completion please complete Sections H and I (Justification for Additional Future Annual Operating Costs) below.*

H. Justification for First Year Additional Future Annual Operating Costs:

Will additional annual operating costs be absorbed into your existing budget? ___Yes___

If not, will additional state funds be needed in the future? _____

If state funds will not be needed in the future, explain the source(s) that will be used. _____

First Fiscal Year Additional Annual Operating Costs Are Anticipated: _____ Will this fiscal year require a partial or full year's operating funds? _____ If a partial year's funds are required, what portion of the year does it cover? _____

(3)

Additional Annual Operating Cost Details:	State Non-Recurring	State Recurring	Federal	Other	Total
Total Costs:					
(a) Number of FTEs					0.00
(b) Total Personnel Costs					\$ 0
(c) Furniture/Equipment					\$ 0
(d) Other Operating Costs					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

I. Justification for First Full Year Additional Future Annual Operating Costs *(If Section H above represents a full year's operating funds, do not complete this section.)*

(2) Will additional annual operating costs be absorbed into your existing budget? _____

If not, will additional state funds be needed in the future? _____

If state funds will not be needed in the future, explain the source(s) that will be used. _____

(2) First Full Fiscal Year Additional Annual Operating Costs Are Anticipated: _____

(3)

Additional Annual	State	State	Federal	Other	Total
--------------------------	--------------	--------------	----------------	--------------	--------------

Operating Cost Details:	Non-Recurring	Recurring			
Total Costs:					
(a) Number of FTEs					0.00
(b) Total Personnel Costs					\$ 0
(c) Furniture/Equipment					\$ 0
(d) Other Operating Costs					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

J. Other Comments:

A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)

B. Priority No. _3_ of _5__

C. Strategic Goal/Action Plan (*if applicable*): Agrisystems Productivity and Profitability
 PSA Goal 2: Economic and Community Development
 PSA Goal 3: Environmental Conservation

D. Project Name and Number (*if applicable*): Turfgrass Research and Extension Center

E. Agency Activity Number and Name:
 1482 Sustainable Agriculture Production Systems: Horticultural Crops
 1487 Natural Resources and Environmental Research and Education: Water Quality and Quantity
 1497 Integrated Pest Management (IPM) for Agriculture and Forestry
 1505 Regulatory and Public Service Programs: Plant and See Certification
 1507 Regulatory and Public Service Programs: Pesticide Regulation

F. Description of Priority:
 South Carolina's tourism industry is largely focused on golf and the natural environment. Golf and turfgrass facilities generate over \$4 billion dollars annually and provide over 15,000 jobs in the state. To remain competitive, golf courses must continue to improve in quality while preserving the natural beauty of our environment. The Turfgrass Research and Extension Center will improve South Carolina's competitive advantage by enhancing synergism with the golf industry through research, technology transfer, and regulatory services.

Research in pest management strategies, water management, and stress physiology will provide advanced strategies for golf course management that will allow the state to develop more competitive courses. At the same time, these strategies will protect the environment by reducing the amount of pesticides used on golf courses.

Clemson Regulatory Services supports the turfgrass industry through regulation of pesticides and fertilizers used on turf, occupational licensing of turf and golf course pesticide applicators, sampling and analysis of pesticides and fertilizers to ensure they are contaminate free and properly formulated products as advertised for sale, certification of pest-free turf and certification of true-to-variety turf, and prevention and mitigation of invasive species of plant pests to the turf and golf courses industries.

G. Detailed Justification for Funding

(1) Justification for Funding Priority:

The Turfgrass Research and Extension Center will provide state-of-the-art laboratories, diagnostic equipment and field laboratories that will be shared by researchers as well as Extension and Regulatory Services personnel. The center will facilitate:

- The transfer of research information to turfgrass producers and golf course managers by Extension personnel
- The establishment of a plant problem clinic for rapid weed identification and diagnosis of diseases and insects
- Coordination of efforts with regulatory services that support the turf and golf industries through regulation of pesticides and fertilizers, licensing for pesticide applicators, certification of pest-free and true-to-variety turf, and prevention or mitigation of invasive species of plant pests.

This project was priority 3 on the PSA 2006 CPIP.

(2)

Total Project Cost Estimates:	Additional State Funds	Previously Authorized State Funds	Total Other Fund Sources	Project Total
Total Project Cost*	5,000,000		5,000,000	\$10,000,000

** If additional annual operating costs from any source of funding are anticipated upon project completion please complete Sections H and I (Justification for Additional Future Annual Operating Costs) below.*

H. Justification for First Year Additional Future Annual Operating Costs:

Will additional annual operating costs be absorbed into your existing budget? __Yes____

If not, will additional state funds be needed in the future? _____

If state funds will not be needed in the future, explain the source(s) that will be used. _____

First Fiscal Year Additional Annual Operating Costs Are Anticipated: _____ Will this fiscal year require a partial or full year's operating funds? _____ If a partial year's funds are required, what portion of the year does it cover? _____

(3)

Additional Annual Operating Cost Details:	State Non-Recurring	State Recurring	Federal	Other	Total
Total Costs:					
(a) Number of FTEs					0.00
(b) Total Personnel Costs					\$ 0
(c) Furniture/Equipment					\$ 0
(d) Other Operating Costs					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

I. Justification for First Full Year Additional Future Annual Operating Costs (*If Section H above represents a full year's operating funds, do not complete this section.*)

(3) Will additional annual operating costs be absorbed into your existing budget? _____

If not, will additional state funds be needed in the future? _____

If state funds will not be needed in the future, explain the source(s) that will be used. _____

(2) First Full Fiscal Year Additional Annual Operating Costs Are Anticipated: _____

(3)

Additional Annual Operating Cost Details:	State Non-Recurring	State Recurring	Federal	Other	Total
Total Costs:					
(a) Number of FTEs					0.00
(b) Total Personnel Costs					\$ 0

(c) Furniture/Equipment					\$ 0
(d) Other Operating Costs					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

J. Other Comments:

- A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)
- B. Priority No. 4 of 5
- C. Strategic Goal/Action Plan (*if applicable*): Agrisystems Productivity and Profitability
- D. Project Name and Number (*if applicable*): Edisto Research and Education Center Infrastructure Improvements
- E. Agency Activity Number and Name:
1489 Nutraceutical Crops
1495 Agriculture Biotechnology
1497 Integrated Pest Management (IPM)
1510 Animal Production Systems
1514 Agronomic Crops
- F. Description of Priority: Clemson University will make critical improvements to the infrastructure at the Edisto Research and Education Center to support research, education and outreach programs for key agricultural commodities, including row crops, melons, vegetables and beef cattle. Current facilities are not adequate to conduct research needed by the state's agricultural producers or to support the center's new role to deliver graduate education classes.
- G. Detailed Justification for Funding
 - (1) Justification for Funding Priority:
 - a. The Edisto Research and Education Center in Blackville serves production agriculture in the state's Coastal Plain, one of the state's primary agricultural areas. Major research and Extension efforts focus on row crops, integrated pest management, precision agriculture, variable rate irrigation, conservation tillage, commercial vegetable production, beef cattle genetics and alternative forage systems for beef cattle. With a fixed acreage of productive land area, the center must maximize every available acre to meet research and outreach needs. Upgrading the infrastructure will greatly increase the center's ability to

b. Infrastructure improvements at the Edisto Research and Education Center will provide needed support for production agriculture research, education and outreach, including:

- This project was priority 4 on the PSA 2006 CPIP.

Total Project Cost Estimates:	Additional State Funds	Previously Authorized State Funds	Total Other Fund Sources	Project Total
Total Project Cost*	1,000,000			\$1,000,000

H. Justification for First Year Additional Future Annual Operating Costs:

If state funds will not be needed in the future, explain the source(s) that will be used. _____

Additional Annual Operating Cost Details:	State Non-Recurring	State Recurring	Federal	Other	Total
Total Costs:					

(a) Number of FTEs					0.00
(b) Total Personnel Costs					\$ 0
(c) Furniture/Equipment					\$ 0
(d) Other Operating Costs					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

I. Justification for First Full Year Additional Future Annual Operating Costs *(If Section H above represents a full year's operating funds, do not complete this section.)*

- (4) Will additional annual operating costs be absorbed into your existing budget? _____
 If not, will additional state funds be needed in the future? _____
 If state funds will not be needed in the future, explain the source(s) that will be used. _____

(2) First Full Fiscal Year Additional Annual Operating Costs Are Anticipated: _____

(3)

Additional Annual Operating Cost Details:	State Non-Recurring	State Recurring	Federal	Other	Total
Total Costs:					
(a) Number of FTEs					0.00
(b) Total Personnel Costs					\$ 0
(c) Furniture/Equipment					\$ 0
(d) Other Operating Costs					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

J. Other Comments:

A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)

B. Priority No. _5_ of _5_

- C. Strategic Goal/Action Plan (*if applicable*): Agrisystems Productivity and Profitability
- D. Project Name and Number (*if applicable*): Expanded BioSafety Level (BSL) III Diagnostic and Research Capability
- E. Agency Activity Number and Name:
1493 Agriculture Biosecurity
1504 Livestock Poultry Health Programs: Animal Health and Diagnostic Laboratory
- F. Description of Priority: Addition to the Clemson University Veterinary Diagnostic Center.
- G. Detailed Justification for Funding

(1) Justification for Funding Priority:

Over the past two decades 75% of the emerging infectious diseases have been zoonotic diseases that are animal-based but also can infect people. In fact, animals are the sentinels for human disease. Examples of birds and animals serving as sentinels for human disease include the West Nile Virus, Monkey Pox, and globally the recent outbreak of the Asian strain of Avian Influenza H5N1. The Asian H5N1 Avian Influenza strain from Asia requires biosafety level III facilities for handling and response. This disease has been predicted to arrive in the United States as early as next year.

Since 9-11, new regulations require routine diagnostic virus isolation to be performed under biosafety level III guidelines for disease control purposes and to protect employees working the laboratory. In addition to Avian Influenza, many of the foreign animal diseases -such as Foot & Mouth Disease, Rift Valley Fever, Classical Swine Fever, and African Swine Fever- should be handled under level III conditions. Also, endemic disease agents in South Carolina such as West Nile Virus, Rabies, Eastern Equine Encephalitis, and Brucellosis should be handled in a level III environment.

The Clemson University Veterinary Diagnostic Center was originally designed to extend an addition to the existing biosafety level II laboratory facility. The prospectus for the level III addition to the existing facility has now been completed. This additional facility would provide for the safety and protection of employees working in veterinary diagnostics and research and enhance disease control measures.

Finally, the central location of this facility supports collaborative research with other universities and state agencies. The biosafety level III laboratory would be easily accessible for enhance collaborative research with the S.C. Department of Health and Environmental Control, the S.C. Department of Natural Resources, the Medical University of South Carolina, and the University of South Carolina Arnold School of Public Health. The Clemson University Livestock Poultry Health Division professional staff is highly qualified and poised to participate in such collaborative research projects on zoonotic and food-borne disease that may threaten the health of South Carolina citizens.

The facility will provide state of the art diagnostic and research facilities to meet the challenge of handling new and emerging zoonotic diseases such as Avian Influenza, West Nile Virus, Nipah Virus, Bovine Spongiform Encephalopathy (BSE –Mad Cow), and Monkey Pox.

Due to the ever increasing concerns regarding biosafety, this facility is now a capital priority. It was not included on the PSA 2006 CPIP.

(2)

Total Project Cost Estimates:	Additional State Funds	Previously Authorized State Funds	Total Other Fund Sources	Project Total
Total Project Cost*	5,000,000,			\$ 5,000,000

** If additional annual operating costs from any source of funding are anticipated upon project completion please complete Sections H and I (Justification for Additional Future Annual Operating Costs) below.*

H. Justification for First Year Additional Future Annual Operating Costs:

(1) Will additional annual operating costs be absorbed into your existing budget? __Yes__

If not, will additional state funds be needed in the future? _____

If state funds will not be needed in the future, explain the source(s) that will be used. _____

(2) First Fiscal Year Additional Annual Operating Costs Are Anticipated: _____ Will this fiscal year require a partial or full year's operating funds? _____ If a partial year's funds are required, what portion of the year does it cover? _____

(3)

Additional Annual Operating Cost Details:	State Non-Recurring	State Recurring	Federal	Other	Total
Total Costs:					
(a) Number of FTEs					0.00
(b) Total Personnel Costs					\$ 0
(c) Furniture/Equipment					\$ 0
(d) Other Operating Costs					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

I. Justification for First Full Year Additional Future Annual Operating Costs (*If Section H above represents a full year's operating funds, do not complete this section.*)

(1) Will additional annual operating costs be absorbed into your existing budget? _____

If not, will additional state funds be needed in the future? _____

If state funds will not be needed in the future, explain the source(s) that will be used. _____

(2) First Full Fiscal Year Additional Annual Operating Costs Are Anticipated: _____

(3)

Additional Annual Operating Cost Details:	State Non-Recurring	State Recurring	Federal	Other	Total
Total Costs:					
(a) Number of FTEs					0.00
(b) Total Personnel Costs					\$ 0
(c) Furniture/Equipment					\$ 0
(d) Other Operating Costs					\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

J. Other Comments:

FY 2007-08 COST SAVINGS & ACTIVITY PRIORITY ADDENDUM

I. 2% COST SAVINGS ASSESSMENT

A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)

B. Agency Activity Number and Name:

C. Explanation of Cost Savings Initiative: See attached transmittal letter.

D. Estimate of Savings:

FY 2007-08 Cost Savings Estimates:	General	Federal	Other	Total
Personnel:				
(a) Number of FTEs	0.00			0.00
(b) Personal Service	0			\$ 0
(c) Employer Contributions	0			\$ 0
Program/Case Services				\$ 0
Pass-Through Funds				\$ 0
Other Operating Expenses				\$ 0
Total	0	\$ 0	\$ 0	\$ 0

E. Activity Impact (*Describe the impact on the activity affected including the impact on customers and clients.*): Reductions in personnel would be subject to State OHR regulations and the specific activities impacted cannot be determined.

F.

Summary of Cost Savings Initiatives for FY 2007-08:	FUNDING				FTEs			
	General	Federal	Other	Total	State	Fed.	Other	Total
Initiative Title:	0	0	0	\$ 0	0	0	0	0.00
Activity Number & Name:								
Initiative Title:	0	0	0	\$ 0	0	0	0	0.00
Activity Number & Name:								
Initiative Title:	0	0	0	\$ 0	0	0	0	0.00
Activity Number & Name:								
TOTAL OF ALL INITIATIVES	\$ 0	\$ 0	\$ 0	\$ 0	0.00	0.00	0.00	0.00

FY 2007-08 COST SAVINGS & ACTIVITY PRIORITY ADDENDUM

II. PRIORITY ASSESSMENT OF AGENCY ACTIVITIES

- A. Agency Section/Code/Name: SECTION 23, P20-Clemson University (Public Service Activities)
- B. Agency Activity Number and Name:
- C. Explanation of Lowest Priority Status: See attached transmittal letter.
- D. Estimate of Savings:

Estimate of Savings:	General	Federal	Supplemental	Capital Reserve	Other	Total
Personnel:						
(a) Number of FTEs	0	0	0	0	0	0.00
(b) Personal Service	0		0	0	0	\$ 0
(c) Employer Contributions	0		0	0	0	\$ 0
Program/Case Services	0	0	0	0	0	\$ 0
Pass-Through Funds	0	0	0	0	0	\$ 0
Other Operating Expenses	0	0	0	0	0	\$ 0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

- E. Activity Impact (*Describe the impact on the activity affected including the impact on customers and clients.*):

F.

Summary of Priority Assessment of Activities	General	Federal	Supplemental	Capital Reserve	Other	Total	FTEs
Activity Number & Name:	0	0	0	0	0	\$ 0	0
Activity Number & Name:	0	0	0	0	0	\$ 0	0
Activity Number & Name:	0	0	0	0	0	\$ 0	0
Activity Number & Name:	0	0	0	0	0	\$ 0	0
Activity Number & Name:	0	0	0	0	0	\$ 0	0
TOTAL OF LOWEST PRIORITIES	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	0.00

